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Allan M. Lowe Lowe Hauptman Gopstein Gilman & Berner, LLP 1700 Diagonal Road, Suite 310 Alexandria, VA 22314			EXAMINER PASCHALL, MARK H	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DUANE CHARLES GATES

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Appeal 2010-007116  
Application 09/534,814  
Patent 5,731,565  
Technology Center 3700

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Before ALLEN R. MACDONALD, *Vice Chief Administrative Patent Judge*,  
and LINDA E. HORNER, and KEN B. BARRETT, *Administrative Patent  
Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

Appeal 2010-007116  
Application 09/534,814  
Patent 5,731,565

## STATEMENT OF THE CASE

Duane Charles Gates (Appellant) seeks our review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 39-58 in reissue application 09/534,814. The reissue application seeks to reissue U.S. Patent 5,731,565, issued March 24, 1998, based on application 08/507,971, filed July 27, 1995. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

## THE INVENTION

Appellant's claimed invention pertains to a segmented coil configuration as a source for generating plasma for use in the processing of a workpiece, such as a semiconductor wafer. *See Spec.*, col. 1, ll. 6-11. Claim 45, reproduced below, is representative of the subject matter on appeal.

45. A coil for use with a low pressure plasma processor for treating a workpiece with an RF plasma wherein the processor includes a low pressure chamber including a workpiece holder for carrying a workpiece that is adapted to be affected by the plasma, the chamber having an inlet for introducing into the chamber a gas which can be converted into the RF plasma for treating the workpiece, the coil being adapted to be positioned to couple an RF field to the gas for exciting the gas to the plasma state, the coil comprising: interior, intermediate and peripheral portions, the interior, intermediate and peripheral portions having turns connected to each other and arranged so the magnetic flux density coupled to the plasma by each of the interior and peripheral coil portions exceeds the magnetic flux density coupled to the plasma by the intermediate coil portion.

### THE REJECTIONS

The following Examiner's rejections are before us for review:

1. Claims 39-58 are rejected under 35 U.S.C. § 251 as being based upon new matter added to the patent for which reissue is sought;
2. Claims 39-58 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement; and
3. Claims 39 and 45 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bignell (US 3,586,905, issued Jun. 22, 1971).

### PRINCIPLES OF LAW

In order to satisfy the written description requirement, "the [original] specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed." *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). "[T]he test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Id.* (citations omitted). One shows possession "by such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the claimed invention." *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997).

The Examiner has the initial burden of presenting evidence or reasoning to explain why persons skilled in the art would not recognize in the original disclosure a description of the invention defined by the claims. *See In re Wertheim*, 541 F.2d 257, 263 (CCPA 1976).

## ANALYSIS

### *The New Matter and Written Description Rejections*

The Examiner found that the claims on appeal introduce new matter into a patent for which reissue is being sought and fail to comply with the written description requirement of § 112, first paragraph. Ans. 3-5. The Examiner addressed the claims in several groups.

Appellant asserts that the Examiner's Answer refers to non-existent line numbers in the claims, refers to non-existent limitations in certain claims, and includes an erroneous reference to claim 30 (which is not on appeal) rather than claim 39. Reply Br. 1. Because we determine, based on a review of the substance of the purported new matter, that we cannot sustain the new matter and written description rejections, we need not attempt to correlate the purported new matter to each rejected claim.

The Examiner found that claims 39, 45, 51, and 54 contain new matter in the form of a description of the coil having three portions and a description of different magnetic flux levels for these three portions. Ans. 3; *see also id.* at 4 (written description rejection on the same bases). Similarly, the Examiner rejected claims 40 and 46-50 on the basis that they refer to a three-portion coil. *Id.* Claim 39, for example, calls for a coil including interior, intermediate and peripheral portions, and the portions being arranged such that the magnetic flux density of each of the interior and peripheral portions exceeds that of the intermediate portion. The Examiner maintains that the original disclosure was directed to a two segment coil and that there is no discussion of magnetic flux in the original disclosure. *Id.*

Appellant argues, *inter alia*, that Figure 4 of the '565 patent shows a coil with three portions: inner coil segment 52, outer coil segment 54, and

the portion connecting those two segments. *See* App. Br. 13; *see also* Spec., col. 3, ll. 61-62 (identifying the inner and outer segments). Appellant also argues that the claimed relative flux density is inherent in the disclosure, and has submitted the Declaration of Roger Patrick in support of that position. Dr. Patrick explains that one of ordinary skill would have known that, when the switch S1 in Figure 4 is open, the inner and outer segments produce magnetic flux of greater density than that of the intermediate segment. Patrick Decl. ¶ 3.

In light of Appellant's arguments and Dr. Patrick's testimony, we conclude that the Examiner has not adequately shown that the disclosure of the issued patent fails to reasonably convey to those skilled in the art that the inventor had possession of a three portion coil where the magnetic flux density of each of the interior and peripheral portions exceeds that of the intermediate portion. Likewise, we cannot find that the rejected claims introduce new matter into the issued patent by the recitation of these features.

The Examiner also found that claims 40, 46, 51, and 54 introduce new matter by reciting three requirements for the intermediate portion configuration. Ans. 3-4; *see also id.* at 4-5 (written description rejection on the same basis). Claim 40, for example, recites: "the intermediate portion being configured so it (a) does not include a complete turn, (b) is substantially less than a complete turn, and (c) includes a lead connected to ends of the turns of the interior and exterior portions." The Examiner further found that claims 51 and 56 include the new matter: "the lead having at least a portion that is straight." Ans. 3. The Examiner appears to maintain

that the original disclosure specifically refers to the outer and inner segments having “arcuate conductor portion[s]” and a conductor having at least one turn, but does not mention a straight section or a partial turn. *See* Ans. 4-6 (citing Spec., col. 3, l. 57 and claim 8). However, at least Appellant’s Figure 4 depicts a portion between the inner and outer coil segments having the recited features. *See also* Patrick Decl. ¶ 3, (9). The Examiner has not adequately explained why one of ordinary skill would fail to recognize that Appellant had possession of the claimed intermediate portion having the recited configuration.

On the record before us, we cannot find that the rejected claims lack written description support or introduce new matter into the issued ‘565 patent. As such, we reverse the rejection of claims 39-58 under section 251 and section 112, first paragraph.

*The Rejection of Claims 39 and 45 as being unpatentable over Bignell*

Claim 39 recites a plasma processor having a low pressure chamber, a workpiece holder for carrying the workpiece to be affected by the plasma, and “a coil positioned to couple an RF field to the gas for exciting the gas to the plasma state.” The chamber has an inlet for introducing into the chamber the gas to be converted to plasma. Initially, the Examiner found that Bignell did not teach a workpiece holder, but, in the Response to Argument section of the Answer, found that Bignell teaches a work holder 12 “that holds the work gas.” Ans. 5, 9. The Examiner maintains that the claims do not specify the type of work processed, and that it could be solid or gas. Ans. 10.



Because the claim describes the gas as being converted to plasma for treating the workpiece, we cannot agree with the Examiner's conclusion that that gas could also be the workpiece. Further, it is not clear from the Examiner's findings as to what structure was found to correspond to the recited chamber where the gas is held by the workpiece holder. We cannot sustain the rejection of claim 39 as obvious in light of Bignell.

Claim 45 recites a coil for use with a low pressure plasma processor having a chamber with a workpiece holder, and calls for "the coil being adapted to be positioned to couple an RF field to the gas for exciting the gas to the plasma state." Although the Examiner found that Bignell discloses a coil, the Examiner does not appear to make any finding that Bignell explicitly or inherently discloses a coil that is adapted to be positioned for exciting the gas to plasma by an RF field. *See* Ans. 5, 9-10. As such, we cannot sustain the rejection of claim 45 as obvious in light of Bignell.

#### DECISION

The decision of the Examiner to reject claims 39-58 is reversed.

#### REVERSED

JRG

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